



Newsletter of the Arizona Geographic Information Council

AGIC Strategic and Business Plans: Results of the Workshops

Strategic Plan

Executive Summary

Last fall a series of workshops was held in four locations around Arizona. These workshops were designed to extract opinions from geospatial professionals and other interested parties regarding the direction AGIC should take in light of a new law passed in Arizona last July. The law put forth the requirement of building a geospatial clearinghouse for the benefit of all Arizonans.

A private firm by the name of Applied Geographics was engaged to conduct the workshops, compile the results, and produce two documents, a strategic plan and a business plan. These documents would then serve as guidelines for AGIC to follow in pursuit of establishing the recently legislated clearinghouse.

The planning documents were completed and were accepted at a special meeting of the AGIC Board in February. Each document has an executive summary that does a good job of spelling out its particular recommendations. To give you an idea of the guidelines AGIC will be following, the executive summaries have been reprinted here.

The Arizona Geographic Information Council (AGIC) initiated a planning process to more effectively meet the geospatial needs and requirements of Arizona. AGIC applied for funding assistance through the Federal Geographic Data Committee (FGDC), as part of the Fifty States Initiative to advance the National Spatial Data Infrastructure (NSDI). In February 2009, Arizona was selected as a grant recipient, specifically to support Strategic and Business Planning for Geographic Information Systems (GIS). When Senate Bill 1318 (SB1318) was signed into law by Governor Brewer in July of 2009, it became a key focal point for the AGIC Steering Committee leading the planning process.

There is an active and knowledgeable stakeholder community of GIS professionals across the state, involved in many different aspects of government and the economy. Expertise in the technology is a prerequisite for many jobs that depend on the availability of geospatial data. The productivity-related benefits of GIS are generally recognized in the professional community, and geospatial data is used in many jobs and business processes related to the generation of revenue and the delivery of services, such as taxation, utilities, permitting, public safety and many other daily operations.

Outreach was conducted and input was collected

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Business Plan

Executive Summary

This business plan for the statewide geospatial clearinghouse is focused on Strategic Goal #1 of the state's recent GIS strategic plan, to "*Facilitate the productive application and sharing of geospatial data and GIS and location-based services to address the needs of Arizonans by establishing a clearinghouse with statewide accessibility.*" This is directly consistent with Senate Bill 1318 (SB1318). The near-term focus is on establishing a state-managed infrastructure, with a central repository and links to the best available data from data originators and stewards where possible.

The success of the clearinghouse will be determined by its contribution to statewide initiatives and business drivers that require reliable geospatial base map data against which program-specific data can be displayed and analyzed. Noteworthy in this context is the common need for base map data across several key statewide initiatives, including the Arizona Renewable Energy Project, AZ3D (for emergency response and planning), and the Arizona Broadband Mapping Project.

Sharing geospatial data, services, and know-how via the clearinghouse will cut down on costly duplication of effort associated with collecting the same data many times by different people and agencies. It will also result in productivity improvements through quicker search results and easier access to data and information. Together, less duplication of effort and more productivity will have a positive impact on the statewide economy and the successful performance of statewide initiatives, and will contribute to efficiency and fiscal responsibility.

A practical organizational approach is necessary to establish the clearinghouse. The recommended approach is to leverage the Arizona Geographic Information Council (AGIC) organization and its committee structure. In addition, a sponsoring agency needs to be officially designated with the responsibility for implementing the clearinghouse.

There are existing examples of websites in Arizona that contain useful collections of geospatial data, including metadata, which could be immediately useful ingredients for the new clearinghouse. The actual review of existing infrastructure as part of this planning discovery process, including examples described in the body of this document, reinforced the need for a clearinghouse. The existing websites are not readily discoverable by a broader community of users who want to find data, perform analysis, and create maps. The sites are aimed at GIS professionals, not general users, thereby diminishing their availability to support all of the strategic initiatives underway in the state.

The investment to build the clearinghouse and its baseline functionality, database structure, and data management workflows can be planned in phases. Key cost line items are also covered in the body of this business plan, but the rough order of magnitude (ROM) costs for three years are estimated to be as follows:

Year	ROM Estimate
1	\$211,000
2	\$181,000
3	\$125,000
Total	\$517,000 ◇

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Previous issues of Surface Matters are available at agic.az.gov/newsletter.

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Surface Matters is the quarterly newsletter of the Arizona Geographic Information Council. It is written for those who want to stay in touch with the vision and activities of AGIC and with the continuing growth of GIS in Arizona.

Your comments about this publication are always welcome. Please send all correspondence to the editor.

Readers are invited to submit articles that they wish to be considered for publication. The author retains all copyrights. Please let the editor know if the article has been published elsewhere.

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Strategic Plan

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from the diverse community of geospatial stakeholders throughout the state during 2009, including a series of regional workshops held in Flagstaff, Kingman, Phoenix (Peoria), and Tucson. In addition, an online survey was conducted to gather input from GIS users and managers. Based on the input from the workshops and survey, preliminary findings and recommendations were compiled and presented at the annual AGIC conference, which was held in Tucson, in November 2009. As a result of these efforts, the following goals were developed:

Strategic and Programmatic Goals of this Plan

Strategic Goal #1: *Facilitate the productive application and sharing of geospatial data and GIS and location-based services to address the needs of Arizonans by establishing a clearinghouse with statewide accessibility.*

Programmatic Goals

- a. Develop a business plan for implementing a clearinghouse.
- b. Collect information on user requirements on matters related to geographic information systems, geospatial data, technologies, products, services, standards, programs and activities and prioritize those requirements to inform decision-making for the implementation of the clearinghouse.
- c. Get necessary support from stakeholders, decision-makers, and funding agents for GIS and geospatial data.
- d. Tie into GITA State IT Plan which mentions GIS as a priority for shared use (i.e. IT Goal #3: Standardization and Reuse – 3.2 Geographic Information Systems).
- e. Assess where geospatial data spending is redundant, where a clearinghouse could satisfy the needs for access to data without duplicate spending.
- f. Design and build a clearinghouse with statewide accessibility and use data from the original source where possible.

Strategic Goal #2: *Achieve greater fiscal responsibility and efficiency through the wise governance of GIS services and geospatial data.*

- a. Conduct a survey of state agencies on the AGIC executive management board on spending for GIS technology and geospatial data.
- b. Create a task force to assess the role and responsibilities of a Geospatial Information Officer (GIO) for the State of Arizona.
- c. Assess the current AGIC bylaws in light of SB1318 and this strategic plan, and modify as necessary to be in compliance.
- d. Develop stronger relationships and find relevant ways to broaden regional committees to become both engaged and involved in the AGIC organizational structure, to further enhance the representation of cities and counties in statewide geospatial matters.

These goals were formulated to support the key requirements of SB1318. They are intended to focus

and concentrate all strategic effort onto the creation, sharing, and governance of geospatial data and services that support the business drivers in Arizona, and enhance well-being and prosperity for all Arizonans. They are also expected to support the provisioning of reliable and accessible geospatial basemap data to support key statewide initiatives, including the Arizona Renewable Energy Project, AZ3D, and the Arizona Broadband Mapping Project.

It is recommended that AGIC leadership achieve alignment between the activities of the current AGIC committees and the goals of the plan. The leadership and membership of the current committees are key resources for enabling concerted action. All committees should be aligned with the overarching strategic goals, but the focus on implementing the more granular programmatic goals will vary by committee.

In Arizona, both government and private sector investments in GIS and geospatial data have been substantial. Unlike investments in information technology infrastructure, there is no central tracking of expenditures on GIS and geospatial data across state agencies in Arizona. There is no clear answer to the question, "How much are we spending on GIS technology and geospatial data?" This reality does not diminish the real success in GIS adoption and utilization across the state. However, it does highlight the need for new approaches to GIS governance and investment strategies, to optimize spending and maximize benefits to all stakeholders, both private and public.

There is no single rolled-up request for additional funding to support this plan across the board. As attention is concentrated across state agencies and the geospatial community at large on the strategic and programmatic goals described in this plan, new funding requirements may be identified. Ideally, opportunities to shift and align priorities into congruence with the plan will also emerge, at no direct cost. The key outcome of this plan will be to achieve greater effectiveness in the deployment of geospatial assets through shared strategy and common goals, and respect for scarce resources.

In the modern era of Government 2.0, greater transparency and collaboration with citizens are expected, and the geospatial clearinghouse required by SB1318 is consistent with these expectations. The estimated financial requirements for the clearinghouse are addressed later in this strategic plan, and a more detailed business plan to support implementation of the clearinghouse has been developed as a highly congruent companion to this strategic plan. ♦

Both the strategic and business plans can be found here:

<http://agic.az.gov/board/business.html>

Height Modernization: Introduction and Update

One of the bigger projects that AGIC is involved with is called Height Modernization. In brief, it's a nationwide effort by the National Geodetic Survey to bring survey monuments up to modern standards. A great deal of information about the subject is available through the web site of the State Cartographer's Office (<http://sco.az.gov/hm/overview.htm>), which states:

"The challenges of managing a rapidly growing state and the need to respond to emergencies and critical Homeland Security programs make it imperative that Arizona continue to develop and improve its geographic information infrastructure. Arizona Height Modernization provides a mechanism for significantly improving the currency and accuracy of our geographic information. This will greatly assist Arizona in managing critical issues, such as homeland and border security, wildland fires, drought monitoring and flood insurance mapping. A minimum annual cost savings of \$5.6M has been estimated for Arizona if Height Modernization is implemented."

"Height Modernization is an effort of the National Geodetic Survey (NGS), an agency within the National Oceanic and Atmospheric Administration (NOAA), to assist states in improving their geodetic control networks. A geodetic control network is the fundamental reference system used for all mapping activities, whether they are national or local in scope. Height Modernization began as a technical effort to utilize emerging Global Positioning System (GPS) technology to determine and propagate precise elevation, hence the name. The primary goal of Arizona Height Modernization is to establish a statewide geodetic network that efficiently supports all surveying, engineering and mapping activities."

"Arizona Height Modernization will save money and improve the delivery of governmental services to the public. Initial benefits (within the first one to five years) will come from improved geodetic control, which will greatly improve the ability to map critical information within Arizona. Investment in Arizona Height Modernization will:

- Provide a more accurate, consistent, and efficient statewide digital land ownership model
- Enable reliable sharing of spatial information between organizations and reduce unnecessary duplication of data
- Lower the costs of surveying, mapping, and aerial photography throughout the state
- Reduce the time and cost of getting surveys from the private sector into the public record
- Allow a more economical determination of elevations for local engineering and mapping projects"

That all sounds mighty fine, but what's really involved? Where does the money come from, where does it go, and what gets done? How is the project

implemented?

The money starts out as a federal grant from the National Geodetic Survey. The grant goes to the Arizona State Land Department, at which point it becomes state money that must be spent according to the terms of the grant. The Land Department then administers the funds to make sure that the work gets done.

The work to be done falls into two broad categories: 1) establishing new survey monuments and updating existing ones, and 2) establishing and operating "continuously operating reference stations," or CORS. These are also known as continuously operating broadcast stations, or COBS, which provide real-time, short-range, high-accuracy GPS positioning. Currently, the program is operating 11 stations, with another 12 stations in various stages of installation. These stations are posted all across Arizona, mostly in less populated areas, and are hosted by local government entities. The referencing signals they broadcast are there for anyone to use, free of charge.

To get ground positions surveyed or CORS stations installed, the Land Department enters into partnerships with local government entities, typically municipalities. More than a dozen such partnerships currently exist. To conduct surveys, the partners can request mini-grants up to \$10,000 per survey to complete height modernization survey work in their areas. They can use the money in whichever way works best for their local situation, which may include contracting work out to private companies. Two stipulations are put upon all reference points that are updated or created: the data must be processed to meet NGS format, and the data must be accepted by NGS for inclusion into the National Spatial Reference System (NSRS). In most cases, once the data are received by NGS, it takes up to two weeks to get them into the NSRS.

The Arizona Height Modernization Program was studied in 2004, proposed in 2005, and first received funding in 2006. So, how has it fared? Is it going well? Is it on track for completion? The initial proposal envisioned a 10-year time frame to completion, so the project should be almost half way through. So far, 23 CORS stations have been funded, 1026 stations have been established or updated and 4 surveys are currently being processed.

The outlook for maintaining the project is bleak, at least for a while. In 2006 Arizona received a half-million dollars in funding. The amount has decreased every year since. For the 2010 fiscal year the state received nothing, which may also be the case in 2011. The original concept was to complete the work with federal funds over the initial 10-year period, then maintain the CORS stations with state funds. Unfortunately, the federal funding for Arizona has been tied up with congressional budgeting arguments (earmarks are involved), and the state has nothing to spare. Will the CORS stations go silent? Will Arizona's portion of the National Spatial Reference System suffer long delays in its modernization? Your guess is as good as anyone's. ♦

Changes A-Comin'

With the passage of the clearinghouse law, the adoption of the strategic and business plans, and the current state of the economy, a few changes will be coming to the AGIC universe. Some will be permanent. One, hopefully, won't be.

For starters, the members of the AGIC Board will be required to attend all meetings themselves. Up until the legislation was passed, board members could assign official alternates to attend meetings and vote in their absence. This is no longer the case. Under the new law there is no provision for alternates. Board members must attend meetings personally in order to fill a quorum and to be able to vote.

The next shake-up will be in the membership of the board itself. Members will begin serving alternating three-year terms, starting immediately. Beginning in 2010, one-third of the membership will be up for renewal every year.

The four AGIC committees may see some changes in their goals. In conformance with the strategic and business plans, each committee will shift its focus to facilitate the establishment of the clearinghouse. How the committees' functions might be altered is still under discussion. The committees are: Conference Committee, Administrative and Legal Committee, Data Committee, and Outreach Committee.

Finally, in 2010 at least, there will be no three-day AGIC conference. Because of the state's economy, the Conference Committee has decided to hold a one-day conference in Phoenix. It will not include hands-on training, but will instead focus on presentations. ♦

4th Annual GIS Career Fest

Sponsored by ASU, AGIC, and GITA

Thursday, April 8th, 2010

12:30-3:30

ASU Memorial Union

Room 220 (Turquoise Room)

Panel Discussion from 1:00-2:00

Interact with GIS Practitioners from 12:30-1:00 and 2:00-3:30

Students: Meet the GIS practitioners that might someday hire you. Learn how a variety of organizations use GIS and learn about *the qualifications they desire in a new employee*. You will have time to meet with people individually to talk about your job interests and what you need to do to get hired when you graduate. There are also a few employment and internship opportunities available now. This is the perfect opportunity to start the networking that is so important to getting a job, either now or when you graduate. Please bring copies of your resume to give to practitioners if you so choose.

GIS Practitioners: Meet with the up-and-coming GIS professionals. Come to ASU; educate GIS students on how your organization uses GIS and the types of people you want to employ. Then sit back and wait for the qualified candidates to come knocking on your doors. Attending the Career Fest will be representatives from city, county, state and federal government and private firms, all of whom are avid users of GIS and your future employers.

Refreshments will be provided.

For questions regarding this seminar, please visit <http://issrweb.asu.edu/careerfest>

or contact Shea Lemar at: shea.lemar@asu.edu. ♦

Contributor

Dave Minkel, National Geodetic Survey
NGS State Advisor



AGIC Roundup

- A new crop of leaders has graced the AGIC Board! Until this time next year the organization will be under the leadership of: President Jana Hutchins, Vice President Keith Larson, and Secretary Gary Irish. Congratulations!

- Not one to delegate important tasks to underlings, President Hutchins has been busy updating the AGIC bylaws. This is necessary because of the legislation and the strategic and business plans.

- The Data Committee has a list of substantial projects it will be pursuing in 2010. They include:
 - Working on the clearinghouse
 - Developing a statewide street centerline data set with addresses
 - Cadastral/parcel data development
 - LIDAR/Elevation
 - Imagery

- The NAIP Imagery project is well funded. As a result, Arizona has been moved up to the 2010 flight schedule. The state is scheduled to receive 3-band color imagery. Members of the AGIC Board are also working on gathering the money to buy an additional set of photographic data in the infrared band.



Calendar of Events

4TH ANNUAL GIS CAREER FEST

APRIL 8TH

12:30 – 3:30 PM

ASU MEMORIAL UNION

ROOM 220 (TURQUOISE ROOM)

TUCSON AREA GIS COOPERATIVE

APRIL 16TH

3:00 – 4:30 PM

201 N STONE AVENUE (NW CORNER OF STONE & ALAMEDA)

PUBLIC WORKS BUILDING

BASEMENT – CONFERENCE ROOM C

ACSM/APLS 2010 ANNUAL CONFERENCE

AMERICAN CONGRESS ON SURVEYING AND MAPPING

ARIZONA PROFESSIONAL LAND SURVEYORS

APRIL 24TH – 28TH

PHOENIX CONVENTION CENTER

100 N 3RD ST, PHOENIX

[HTTP://ACSM.NET](http://acsm.net)

GITA – NOT YOUR FATHER'S GIS CONFERENCE

APRIL 25TH – 29TH

8:00 AM – 5:00 PM DAILY

PHOENIX CONVENTION CENTER

100 N 3RD ST, PHOENIX

[HTTP://WWW.MYROBUST.COM/WEBSITES/GITA2010](http://www.myrobust.com/websites/gita2010)

ESRI USER GROUP MEETING AND DINNER

APRIL 25TH

5:30 PM – 9:00 PM

HYATT REGENCY PHOENIX

COWBOY ARTIST ROOM

122 N 2ND ST, PHOENIX

[HTTP://WWW.ESRI.COM/EVENTS/GITA/EVENTS/](http://www.esri.com/events/gita/events/)

ESRI SOFTWARE USERS ARE INVITED TO THE ESRI USER GROUP MEETING AND DINNER TO VIEW PRESENTATIONS FEATURING WHAT'S NEW IN GIS SOFTWARE, INCLUDING ARCGIS 10, AND ADDITIONAL ESRI SOLUTIONS FOR YOUR ORGANIZATION. ENJOY A BUFFET DINNER AND TAKE ADVANTAGE OF THE OPPORTUNITY TO NETWORK AND SOCIALIZE.

NOTE: THERE'S **NO COST** TO ATTEND THE GATHERING. YOU DO NOT NEED TO ATTEND ACSM OR GISC TO ATTEND THE MEETING AND DINNER, BUT YOU DO NEED TO RSVP BY **APRIL 21**.

AGIC Executive Board Meeting

MAY 6TH

10:00 AM – 12:00 NOON

MARICOPA ASSOCIATION OF GOVERNMENTS

302 N 1ST AVENUE, PHOENIX

2ND FLOOR, SAGUARO ROOM

NORTHWEST CORNER OF 1ST AVE. AND VAN BUREN ST.

[HTTP://AGIC.AZ.GOV/BOARD/MEETINGS.HTM](http://agic.az.gov/board/meetings.htm)